

Cluster \ Class	1	2
1	5	2
2	10	14
3	2	10
4	5	20

Find the dominant winner per class.  
If they are close, we need to decide.

See the following case:

Class \ Cluster	1	2
1	5	2
2	10	4
3	10	9
4	20	19

All "winners" are in cluster 1. If we accept it, we are wrong, as we have 2 clusters!

## Metrics

### Recall or Sensitivity per class.

$$R_1 = 5/7 \quad 71.42\%$$

$$R_2 = 10/14 \quad 71.42\%$$

$$R_3 = 10/12 \quad 83.33\%$$

$$R_4 = 20/25 \quad 80\%$$

### Precision per cluster

$$\text{Cluster 1} : \frac{5+10}{22} = 68.18\%$$

$$\text{Cluster 2} : \frac{10+20}{36} = 83.33\%$$

### Accuracy of clustering

$$\frac{5+10+10+20}{58} = \frac{45}{58} = 77.58\%$$